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(54) Picture display stand

(57) A display stand (200) comprises a rear panel (210), a front panel (220) having a display surface (221) facing outwards, at least one connection element (230) which hinges the rear panel (210) to the front panel (220) and at least one rim element (240) which forms, in a closed folded configuration, a box rim (250). In the closed folded configuration the rear panel (210), the front panel (220), the connection element (230) and the rim element (240) define an annular box-like structure; the part of the front panel (220) comprising the display surface (221) is supported distanced from the rear panel (210) by the box rims (250);each box rim (250) comprises a wall positioned on a plane substantially parallel and projecting from the plane of the display surface (221), a wall which is placed side by side with the front panel (200) and positioned on a plane substantially parallel and recessed in relation to the plane of the display surface (221).

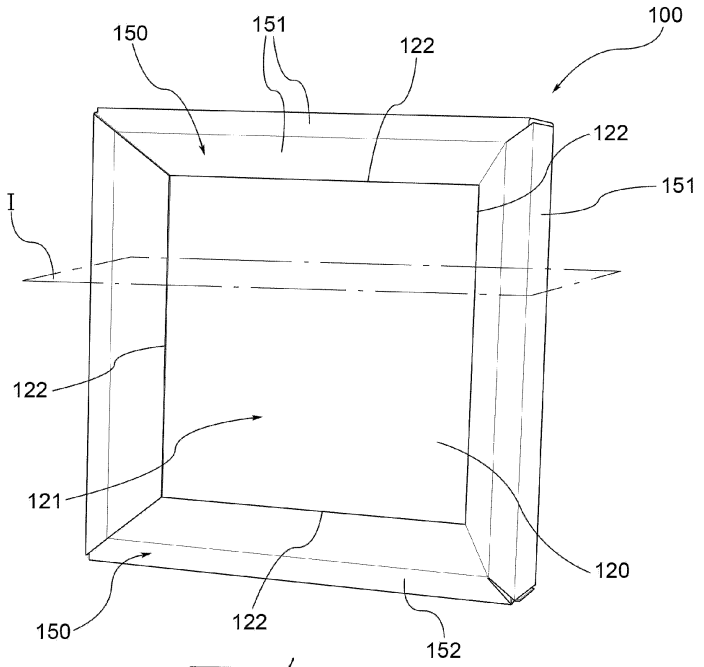

Fig.1

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Description

[0001] The present invention relates to a display stand for pictures, in particular for photographs, prints or illustrations.

[0002] The picture display stand sector is becoming increasingly widespread thanks mainly to the development of highly technological devices and particularly innovative photographic printing systems which enables even inexpert users to obtain high quality pictures, both in electronic format and on paper.

[0003] Traditional picture display stands are generally made from resistant materials such as wood, metal, ceramic or glass and may therefore prove expensive, bulky, heavy and fragile.

[0004] To respond to the growing demand for lightweight, economical and easy to transport products, display stands made starting from a punched sheet, mainly in card or other lightweight and foldable material suitable for being folded by the end user directly to form said display stand are becoming widespread.

[0005] One example of a display stand made starting from a punched sheet is represented by the patent document US7793451 describing an internally hollow frame, comprising a rear panel on which the photograph to be displayed is placed and a front panel provided with an aperture which defines the rims of the frame and through which it is possible to see the photograph displayed on the rear panel.

[0006] Such frame is fragile and in any case easily deformable on account of the aperture present on the front panel which weakens the entire structure. In addition, the rims of the frame have an essentially aesthetic function: in fact by ending in the aperture of the front panel, such rims are prone to collapse on themselves and are thus unsuitable for sustaining and stiffening the structure of said frame.

[0007] The perceived need for picture display stands, obtained starting from a punched, foldable sheet is that of making lightweight and substantially non-deformable stands.

[0008] The purpose of the present invention is to overcome the drawbacks of the prior art bearing in mind the requirements of the sector.

[0009] Such purpose is achieved by a picture display stand and production method thereof according to claims 1 and 15. The dependent claims describe preferred or advantageous embodiments of the display stand.

[0010] The characteristics and advantages of the display stand according to the present invention will be evident from the description given below, made by way of a nonlimiting example, according to the appended drawings, wherein:

[0011] - figure 1 shows an axonometric view of a display stand not pertaining to the present invention;

[0012] - figure 1a shows a cross-section of the display stand in figure 1 according to the cross-section plane I-I;

[0013] - figure 2 shows a plan view of a punched sheet starting from which the display stand in figure 1 is made;

[0014] - figure 3 shows an axonometric view of the display stand in figure 1 in an intermediate folding step;

[0015] - figure 4 shows an axonometric view of a display stand according to the present invention; according to a second embodiment variant;

[0016] - figure 4a shows a cross-section of the display stand in figure 4 according to the cross-section plane IV-IV;

[0017] - figure 5 shows a plan view of a punched sheet starting from which the display stand in figure 4 is made

[0018] - figures 6 and 7 shows an axonometric view of the display stand in figure 4 in an intermediate folding step;

[0019] - figure 8 shows an axonometric view of the back of a display stand according to the present invention;

[0020] - figure 9 shows a portion of the punched sheet in figures 2 and 5 , according to a variant;

[0021] - figure 10a to 10f and figures 11a to 11f show a cross-section view of the box rim of the display stand in figure 1 and 4, according to a series of variants.

[0022] With reference to the appended drawings, and in particular to figures 1, 4 and 8, a picture display stand 100,200 is shown of the type obtained starting from a punched, foldable sheet 101, 201.

[0023] The punched sheet 101,201 is made from lightweight, foldable material, preferably from card.

[0024] The punched sheet 101,201 1 is suitable for being folded along folding lines and for passing from an initial open configuration (shown in figures 2 and 5) and a closed, folded configuration in which it forms, namely, the display stand 100,200.

[0025] The display stand 100,200 comprises a rear panel 110, 210 and a front panel 120,220 joined to each other by means of a connection element 130, 230 (figures 3, 6 and 7) .

[0026] The front panel 120,220 is delimited by folding lines 122,222 of the punched sheet 101,201 and has a display surface 121,221 suitable to hold the picture to be displayed. Said display surface 121,221 faces towards the outside of the display stand 100,200.Preferably, the front panel 120, 220 is substantially free of apertures.

[0027] The front panel may be a triangular, square, rectangular, trapezoidal or polygonal shape.

[0028] Preferably, the display surface 121,221 occupies the entire front panel 120,220 and is delimited by the folding lines 122,222 of the punched sheet.

[0029] According to one variant, the display surface 121,221 occupies only a portion of the front panel 120, 220.

[0030] The connection element 130, 230 hinges the rear panel 110, 210 to the front panel 120, 120 along a folding line 122,222. Said connection element 130, 230 comprises at least one folding line and forms, in the closed folded configuration, at least one box rim 150, 250 of the display stand 100,200.

[0031] Te display stand 100, 200 further comprises at least one rim element 140, 240, hinged to the rear panel

10, 210 or to the front panel 120,220), along a folding line 122,222. Said rim element 140, 240 comprises at least one folding line and forms, in the closed folded configuration, at least one further box rim 150, 250 of the display stand 100,200.

[0032] The box rim 150, 250 is joined:

[0033] - on one side, to the rear panel 110, 210 or to the front panel 120, 220 by a folding line , and on the opposite side to the front panel 120, 122 or to the rear panel 110,210 by a joint;

[0034] or

[0035] - on one side, to the rear panel 110, 210 by a folding line, and on the opposite side to the front panel 120, 220 by another folding line.

[0036] The box rim 150, 250 being joined on both sides to the front panel 120, 220 and to the rear panel 110, 210, lends strength and solidity to the display stand 100, 200. In particular, the box rim 150, 250 lends compression resistance and prevents the display stand 100, 200 from collapsing on itself in the closed folded configuration. The box rim 150, 250 thus represents a structural support element of the display stand 100,200 and not a purely aesthetic element. Preferably, in the closed folded configuration, the rear panel 110,210, the front panel 120,220, the connection element 130,230 and the rim element 140,240 form a display stand having an annular box-like structure.

[0037] Preferably, the display stand 100, 200 has a substantially closed box-like structure suitable for strengthening said display stand 100,200. Preferably, the box-like structure defines a substantially closed inner space 160, 260. The box-like structure lends compression resistance and prevents the display stand 100, 200 from collapsing on itself in the closed folded configuration.

[0038] Preferably, the display stand 100, 200 comprises four box rims 150, 250, which join each side of the front panel 120, 220 to the respective side of the rear panel so as to lend solidity to the display stand 100, 200. The box rims 150, 250 thus constitute a structural part of the display stand 100, 200 and not a purely aesthetic element.

[0039] Preferably, the box rim 150, 250 comprises at least two walls 151, 251, joined along a folding line and folded to form an acute or obtuse or right angle α (figures 10a to 10f and 11a to 11f). The box rim 150, 250 joined on both sides to the front panel 120, 220 and to the rear panel 110, 210, and fitted with two walls 151, 251 joined at the corners, proves particularly robust and resistant to deformation.

[0040] Preferably, the box rim 150, 250 comprises a plurality of walls 151, 251, joined along folding lines and folded to form a plurality of obtuse angles α so as to form a partially circular profile (figure 11f).

[0041] Preferably, the box rim 150, 250 comprises at least one wall 152, 252 positioned on a plane substantially parallel to the plane of the display surface 121, 221 (figures 10b, 10e and from 11a to 11e). The box rim 150, 250, joined on both sides to the front panel 120, 220 and to the rear panel 110, 210, fitted with a wall 151, 251 positioned on a plane substantially parallel to the plane of the display surface 121, 221 and joined at the corners with two further walls 151, 251 proves particularly robust and resistant to deformation.

[0042] Preferably, in the closed folded configuration, the part of the front panel 120, 220 comprising the display surface 121, 221 is supported distanced from the rear panel 110, 210 by the box rims. Such configuration makes it possible to make a three dimensional display stand 100,200 in which the display surface 121,221 is in the foreground in relation to the rear panel 110,210. In addition, the presence of the box rims all around the display surface 121,221 increases the three-dimensional effect of the display stand.

[0043] The display stand 100, 200 comprises a number of box rims 150, 250, equal to the number of sides of the front panel 120, 220. For example if the front panel 120, 220 is square or rectangular , the display stand 100, 200 comprises four box rims 150, 250; if the front panel 120, 220 is triangular , the display stand 100, 200 comprises three box rims 150, 250.

[0044] Preferably, the box rim 150, 250 comprises a portion which is placed side by side with the front panel 120,220 (figures 10a to 10f and figures 11a to 11f).

[0045] Preferably, the box rim 150, 250 comprises a portion projecting substantially vertically in relation to the front panel 120,220 (figures 10a to 10c, 10e, 10f, 11a, 11c, 11d, 11f).

[0046] Preferably, the box rim 150, 250 comprises a portion which is recessed in relation to the front panel 120,220 (figures 10c, 10d and 11a to 11c, 11e).

[0047] Preferably, the rear panel 110, 210 and/or the front panel 120, 220 and/or the connection element 130, 230 and/or the rim element 140, 240 comprises at least one tab 105, suitable for forming a joint of the annular box-like structure. The tabs 105 present at the sides of the connection element 130, 230 and of the rim element 140, 240 snap engage the box rims 150, 250 to each other. The tabs 105 present on the base of the connection element 130, 230 and of the rim element 140, 240 snap engage the box rims 150, 250 to the front panel 120, 220 or to the rear panel 110, 210.

[0048] Preferably, the rear panel 110, 210 and/or the front panel 120 220 and/or the connection element 130, 230 and/or the rim element 140, 240 comprises at least one slot 107 and/or one notch 106 suitable for receiving at least one tab 105 to form the joint of the annular box-like structure.

[0049] Preferably, the coupling of the tab 105 with the slot 107 and /or the notch 106 forms a joint suitable for attaching the components 110,210,120,220,130,230, 140,240 of the display stand 100, 200without the need for further retention means such as glue, adhesive tape , etc.

[0050] Figures 1 to 3 show the display stand 100 according to a first embodiment variant not pertaining to

the present invention.

[0051] In said first variant, the front panel 120 comprises three rim elements 140 each hinged to a side of the front panel 120 by means of a folding line. In the closed folded configuration, each rim element 140 forms a box rim 150 snap engaged to the rear panel 110. In said first variant therefore, the box rims 150 are joined by a folding line to the front panel 120 and by means of a joint to the rear panel 110. In the closed folded configuration, the display surface 121 is supported distanced from the rear panel 110 by the box rims 150.

[0052] Figures 4 to 7 show the display stand 200 according to a second embodiment variant pertaining to the present invention.

[0053] In said second variant, the rear panel 210 comprises three rim elements 240 each hinged to a side of the rear panel 220 by means of a folding line. In the closed folded configuration, each rim element 240 forms a box rim 250 snap engaged to the front panel 220. In said second variant therefore, the box rims 250 are joined by a folding line to the rear panel 210 and by means of a joint to the front panel 220.

[0054] Preferably, in said second variant, the front panel 220 comprises three rim elements 240 each hinged to a side of the front panel 220 by means of a folding line. In the closed folded configuration, each rim element 240 supports the display surface 221 at the bottom in relation to the rear panel.

[0055] Preferably, in said second variant, the box rim 250 comprises a wall 251 projecting from the plane of the display surface 221 and a wall 252 recessed in relation to the plane of the display surface 221.

[0056] Figures 8 and 9 show the rear panel 110, 210 of the display stand 100, 200.

[0057] Preferably, the rear panel 110, 210 comprises shaped slits 118 and/or folding lines 119 suitable for forming a coupling 116 for hanging the display stand 100,200.

[0058] According to one variant, shown in figure 9, the rear panel 110, 210 further comprises shaped slits 118 and/or folding lines 119 suitable for forming an easel 117 for the display stand 100,200.The presence of the easel 117 makes it possible to obtain a display stand which is self-supporting in a substantially vertical position.

[0059] The front panel 120, 220 has a display surface 121,221 suitable for holding a picture to be displayed.

[0060] According to one variant, the display surface 121, 221 is printed: in other words, the image to be displayed is printed directly onto the display surface 121, 221.

[0061] In a further variant, the front panel 120, 220 comprises, on the display surface 121, 221, retention means of a picture mount bearing a picture. In other words, the front panel 120, 220 comprises means suitable for retaining for example a photograph, print or picture. Said retention means comprises slits, notches, adhesive elements, tearing elements, clip elements.

[0062] A display stand 100, 200 according to the present invention can be easily customised according to the user's requirements and easily sent to such user who may directly assemble said display stand. For such reasons, a display stand 100, 200 according to the present invention is particularly suitable for on-line printing systems. Such systems usually comprise an Internet site to which the user links up to send in his/her own photographs or choose pictures from a catalogue , and then receive the prints of such photographs or pictures at the desired address.

[0063] Method of making a display stand 100,200 comprising the steps of:

[0064] - linking up to an internet site;

[0065] - selecting an image from a catalogue of possible images provided on the site or sending an image to the site via internet;

[0066] - providing a punched sheet 101,102 suitable for passing from an initial open configuration to a closed, folded configuration and comprising:

[0067] a rear panel 110, 210,

[0068] a front panel 120, 220 delimited by folding lines 122, 222 of the punched sheet 101, 201 and having a display surface 121, 221, and

[0069] at least one rim element 140, 240, hinged to the rear panel 110, 210 or to the front panel 120, 220, which forms, in the closed folded configuration, a box rim 150, 250 of the display stand 100,200;

[0070] - printing the image directly onto the display surface 121, 221;

[0071] - sending the punched sheet 101,201 to a recipient;

[0072] - folding the punched sheet 101,201 so as to form an annular box-like display stand 100,200 wherein the display surface 121,221 faces outwards and attaching the box rim 150,250 to the front panel 120,220 or to the rear panel 110,210.

[0073] Preferably, the step of sending the punched sheet 101, 201 to a recipient comprises the step of folding the punched sheet into a flat, space-saving configuration.

[0074] Preferably, the step of attaching the box rim 150, 250 comprises the step of snap-engaging the box rim 150, 250 to the front panel 120, 220 or to the rear panel 110, 210.

[0075] In a first embodiment variant, the step of folding the punched sheet 101, 201 comprises the steps of:

[0076] - folding each rim element 140 of the front panel 120 in the opposite direction to the display surface 121 so as to form a box rim 150;

[0077] - attaching the box rims 150 to each other by snap-engaging;

[0078] - closing the rear panel 110 over the front panel 120 so as to form a further box rim 150;

[0079] - snap-engaging the rear panel 110 to the front panel so as to form an annular box-like display stand 100.

[0080] In a second alternative variant, the step of folding the punched sheet 101, 201 comprises the steps of:

[0081] - folding each rim element 240 of the rear panel 220 in the opposite direction to the display surface 221 so as to form a box rim 250;

[0082] - attaching the box rims 250 to each other by snap-engaging;

[0083] - closing the front panel 220 over the rear panel 210 so as to form a further box rim 250;

[0084] - snap-engaging the front panel 220 to the rear panel 210 so as to form an annular box-like display stand 200.

[0085] Innovatively, a picture display stand according to the present invention is particularly lightweight and substantially non-deformable.

[0086] Advantageously, a picture display stand according to the present invention resists compression stresses well and does not collapse on itself.

[0087] Advantageously, the picture display stand according to the present invention is particularly resistant; for example it comprises box rims which constitute structural supports of the display stand itself.

[0088] It is clear that a person skilled in the art may make variations to the device described above while remaining within the scope of protection as defined by the following claims.

Claims

1. Display stand (200) made by means of a punched sheet (201) in folding material suitable for passing from an initial open configuration to a folded closed configuration, wherein said punched sheet (201) defines for the display stand (200)

   - a rear panel (210);
   - a front panel (220) delimited by folding lines (222) of the punched sheet (201) and having a display surface (221)facing outwards;
   - at least one connection element (230) which hinges the rear panel (210) to the front panel (220) and forms, in the closed folded configuration, at least one box rim (250) of the display stand (200);
   - at least one rim element (240), hinged to the rear panel (210) or to the front panel (220), and which forms, in the closed folded configuration, at least one further box rim (250) of the display stand (200) connected to the front panel (220) or to the rear panel (210);

   wherein, in the closed folded configuration the rear panel (210), the front panel (220), the connection element (230) and the rim element (240) define an annular box-like structure; and

   wherein, in the closed folded configuration, the part of the front panel (220) comprising the display surface (221) is supported distanced from the rear panel (210) by the box rims (250);

   characterised by the fact that each box rim (250) comprises:

   - a wall positioned on a plane substantially parallel to the plane of the display surface (221) and projecting from the plane of the display surface (221), and
   - a wall positioned on a plane substantially parallel to the plane of the display surface (221), recessed in relation to the plane of the display surface (221) and which is placed side by side to the front panel (220).

2. Display stand (200), according to claim 1, wherein the front panel (220) comprises three rim elements (240) each hinged to one side of the front panel (220), and wherein each rim element (240) forms, in the closed folded configuration, a box rim (250), connected by slotting to the rear panel (210).

3. Display stand (200), according to claim 1, wherein the rear panel (210) comprises three rim elements (240) each hinged to sides of the rear panel (210), and wherein each rim element (240) forms, in the closed folded configuration, a box rim (250), connected by slotting to the front panel (220).

4. Display stand (200), according to any of the previous claims, wherein the box-like structure is substantially closed to define an inner space (260) in such a way as to strengthen the display stand (200).

5. Display stand (200), according to any of the previous claims, wherein the box rim (250) comprises at least two walls (251), joined along a folding line, folded to form an acute or obtuse or right angle.

6. Display stand (200), according to any of the previous claims, wherein the rear panel (210) and/or the front panel (220) and/or the connection element (230) and/or the rim element (240) comprises at least one tab (105), suitable for forming a joint of the annular box-like structure.

7. Display stand (200), according to claim 6, wherein the rear panel (210) and/or the front panel (220) and/or the connection element (230) and/or the rim element (240) comprises at least one slot (107) and/or one notch (10) suitable for receiving at least one tab (105) to form the joint of the annular box-like structure.

8. Display stand (200), according to any of the previous claims, wherein the rear panel (210) comprises shaped slits (118) and/or folding lines (119) suitable for forming a coupling (116) for hanging the display stand and/or for forming an easel (117) for the display stand (100,200).

9. Display stand (200), according to any of the previous claims, wherein the display surface (221) is printed.

10. Display stand according to any of the claims from 1

to 9, wherein the front panel (220) comprises, on the display surface (221), retention means of a picture mount bearing a picture.

11. Method of making a display stand (200), comprising the steps of:

- linking up to an internet site;
- selecting an image from a catalogue of possible images provided on the site or sending an image to the site via internet;
- providing a punched sheet (102) suitable for passing from an initial open configuration to a closed folded configuration and comprising:

  a rear panel (210)
  a front panel (220) delimited by folding lines (222) of the punched sheet (201) and having a display surface (221), and
  at least one rim element (240), hinged to the rear panel (210) or to the front panel (220), which forms, in the closed folded configuration, a box rim (250) of the display stand (200);

- printing the image directly onto the display surface (121,221);
- sending the punched sheet (201) to a recipient;
- folding the punched sheet (201) so as to form an annular box-like display stand (200), according to any of the previous claims, wherein the display surface (221) faces outwards and attaching the box rim (250) to the front panel (220) or to the rear panel (210).

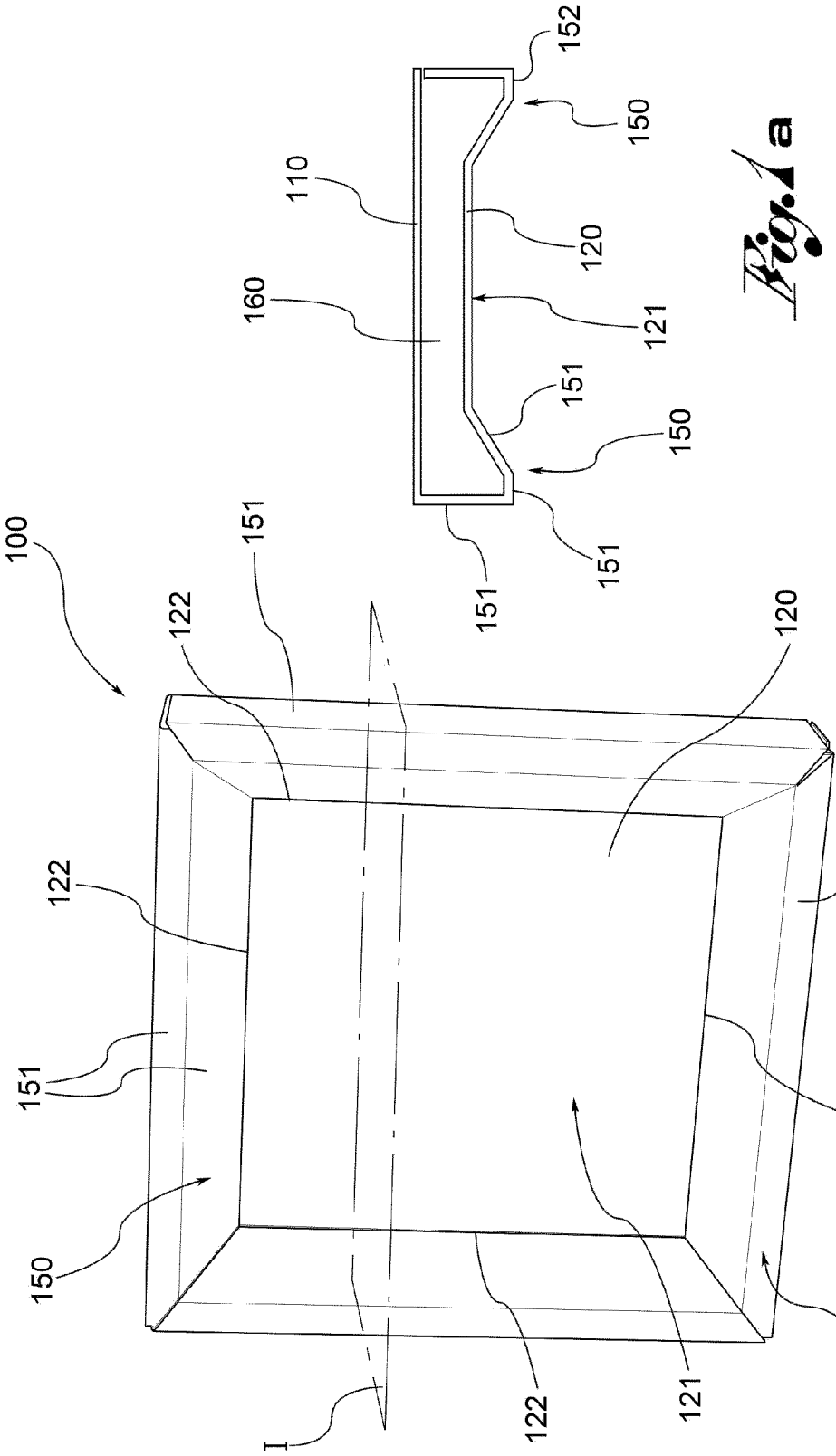
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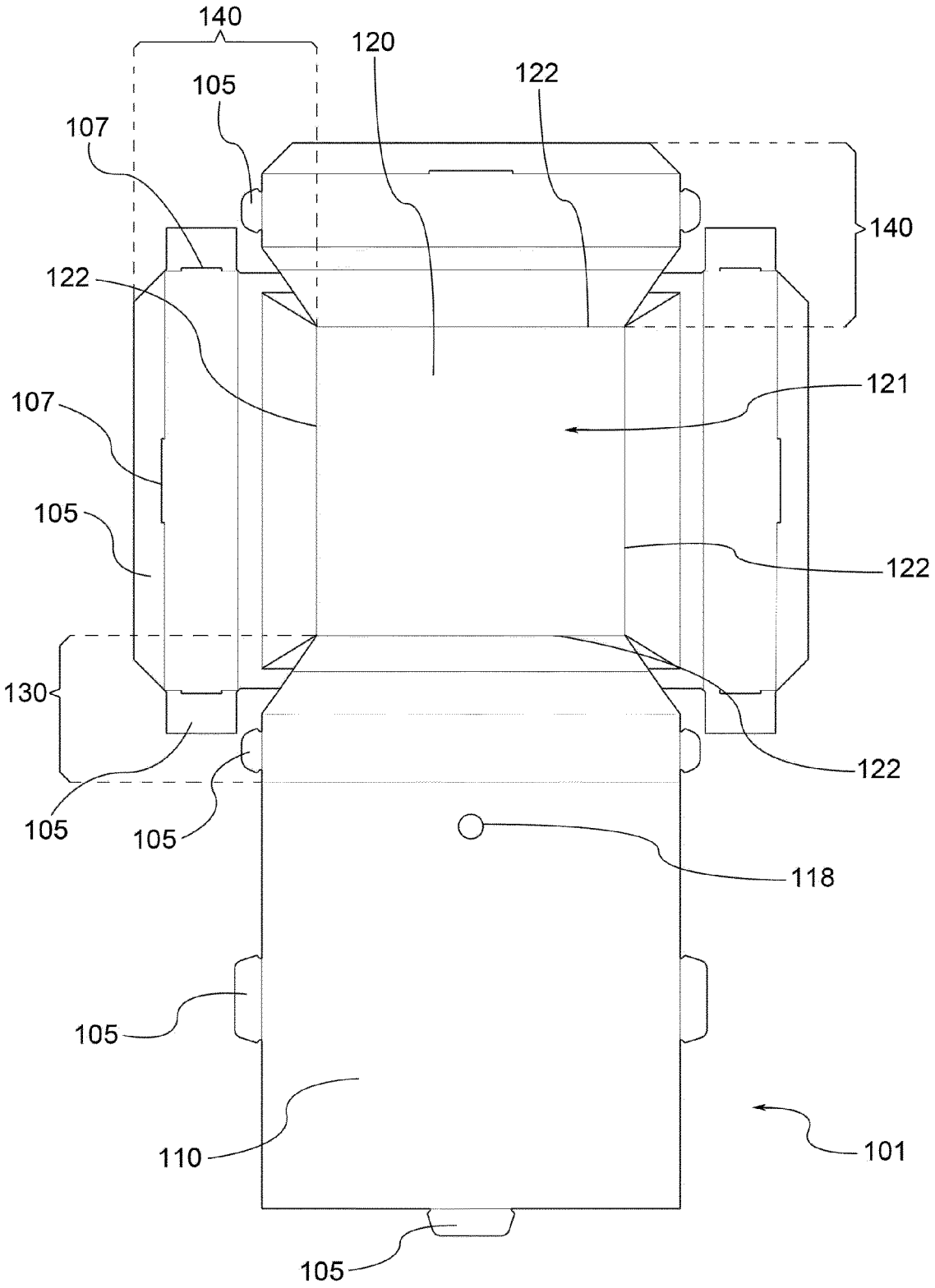
Fig.1a

Fig.1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105

Fig. 2

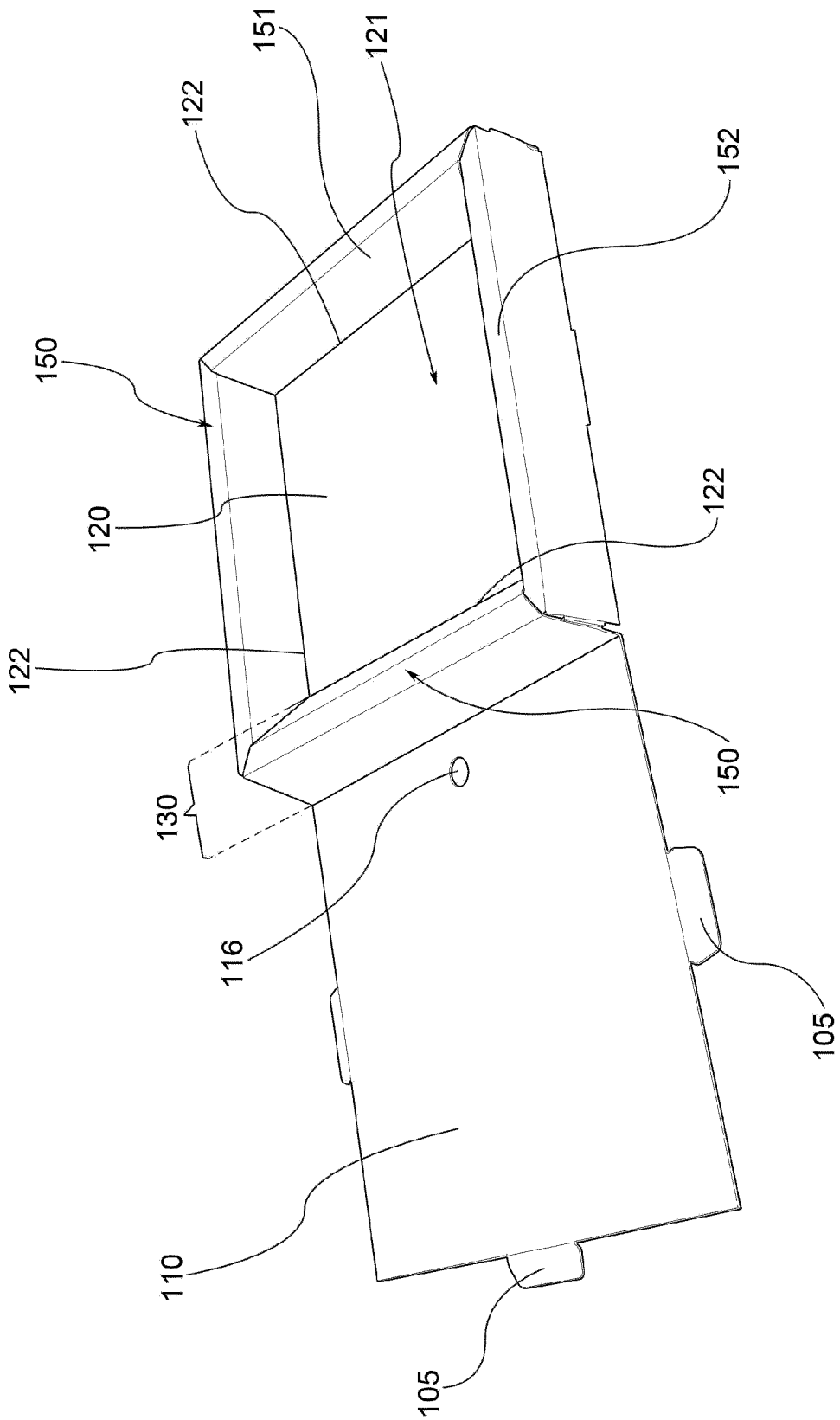
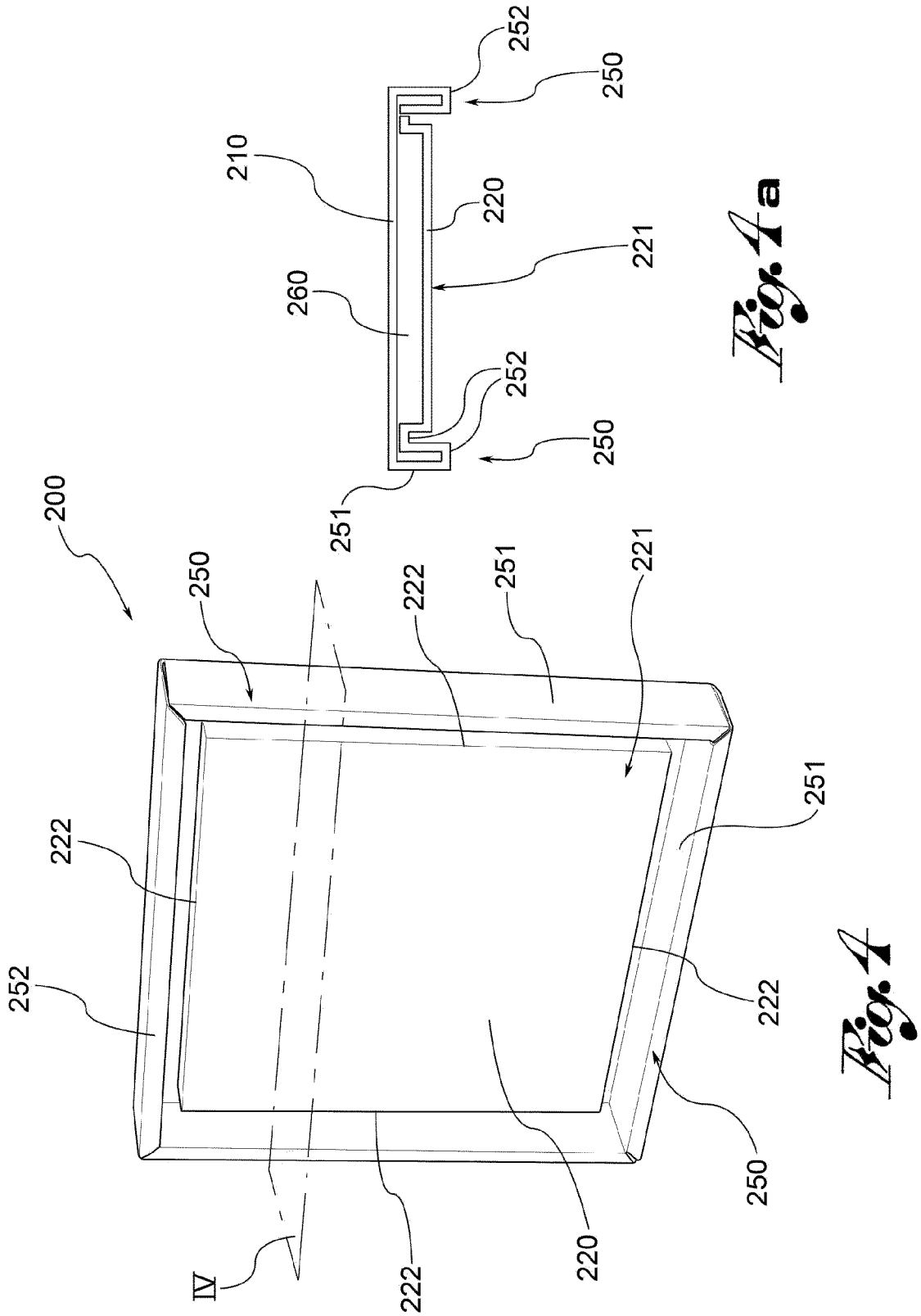


Fig.3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221
260
252
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251
221
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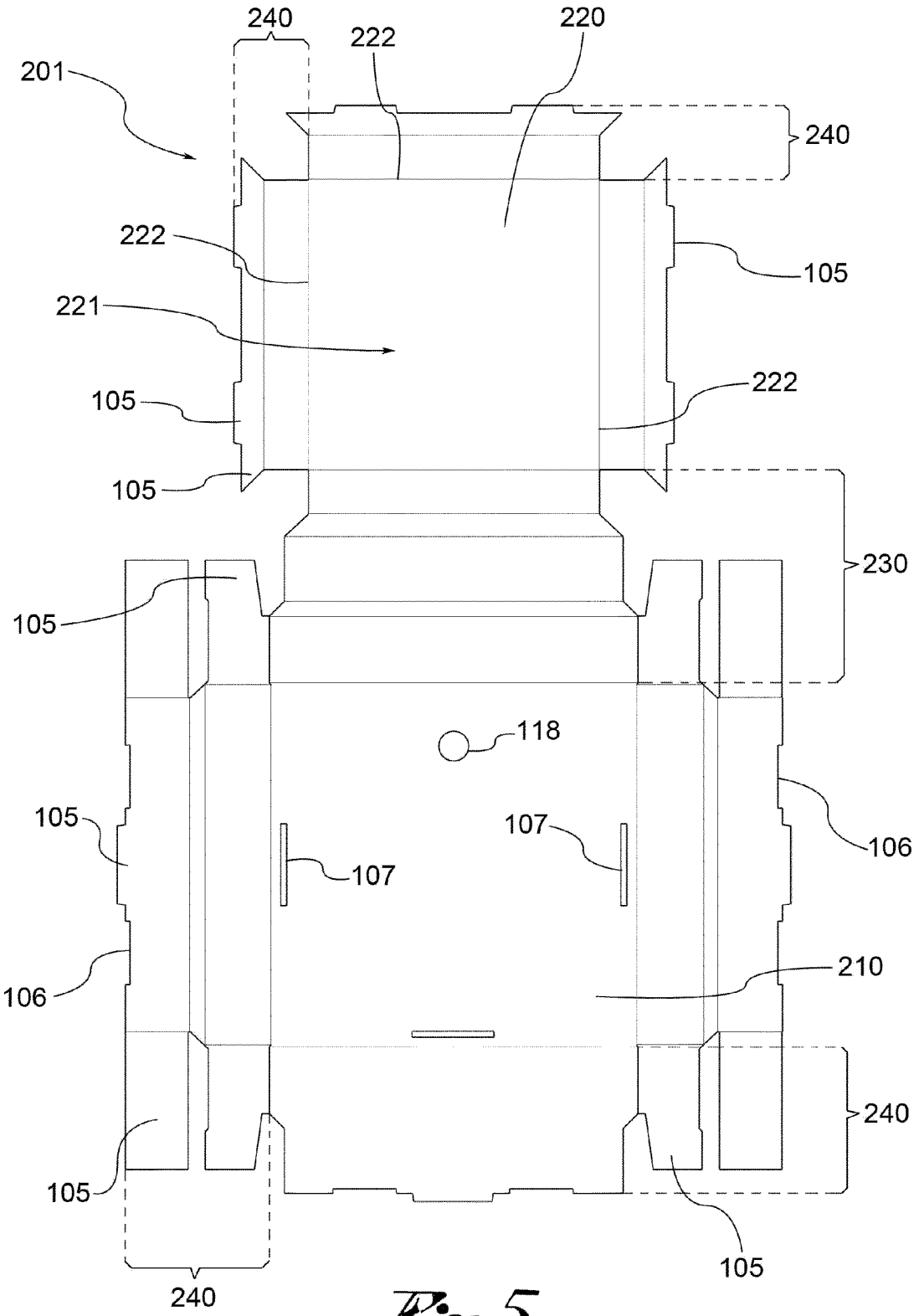
250
220
IV
222
220

Fig. 4a

Fig. 4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240

Fig. 5

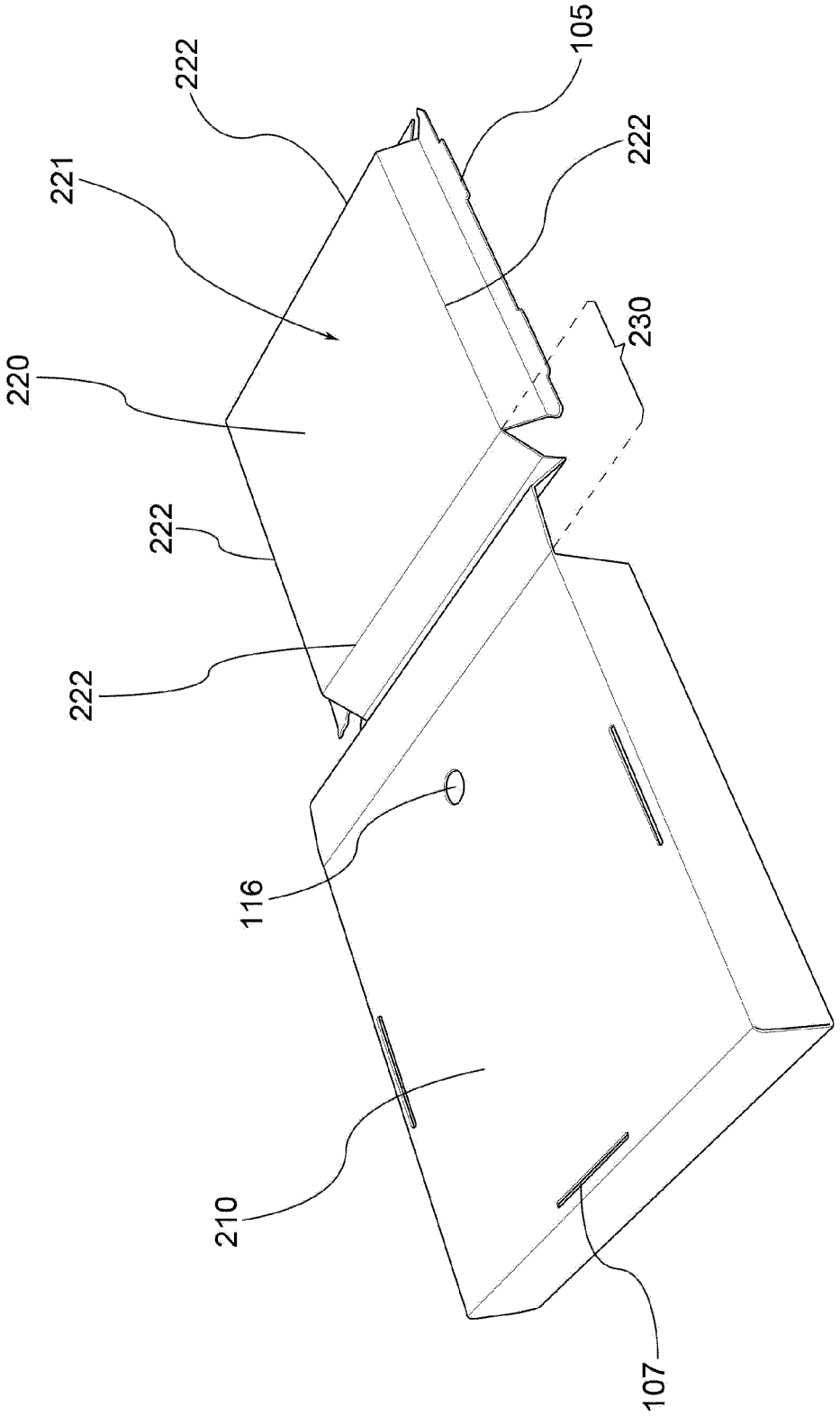

Fig. 6

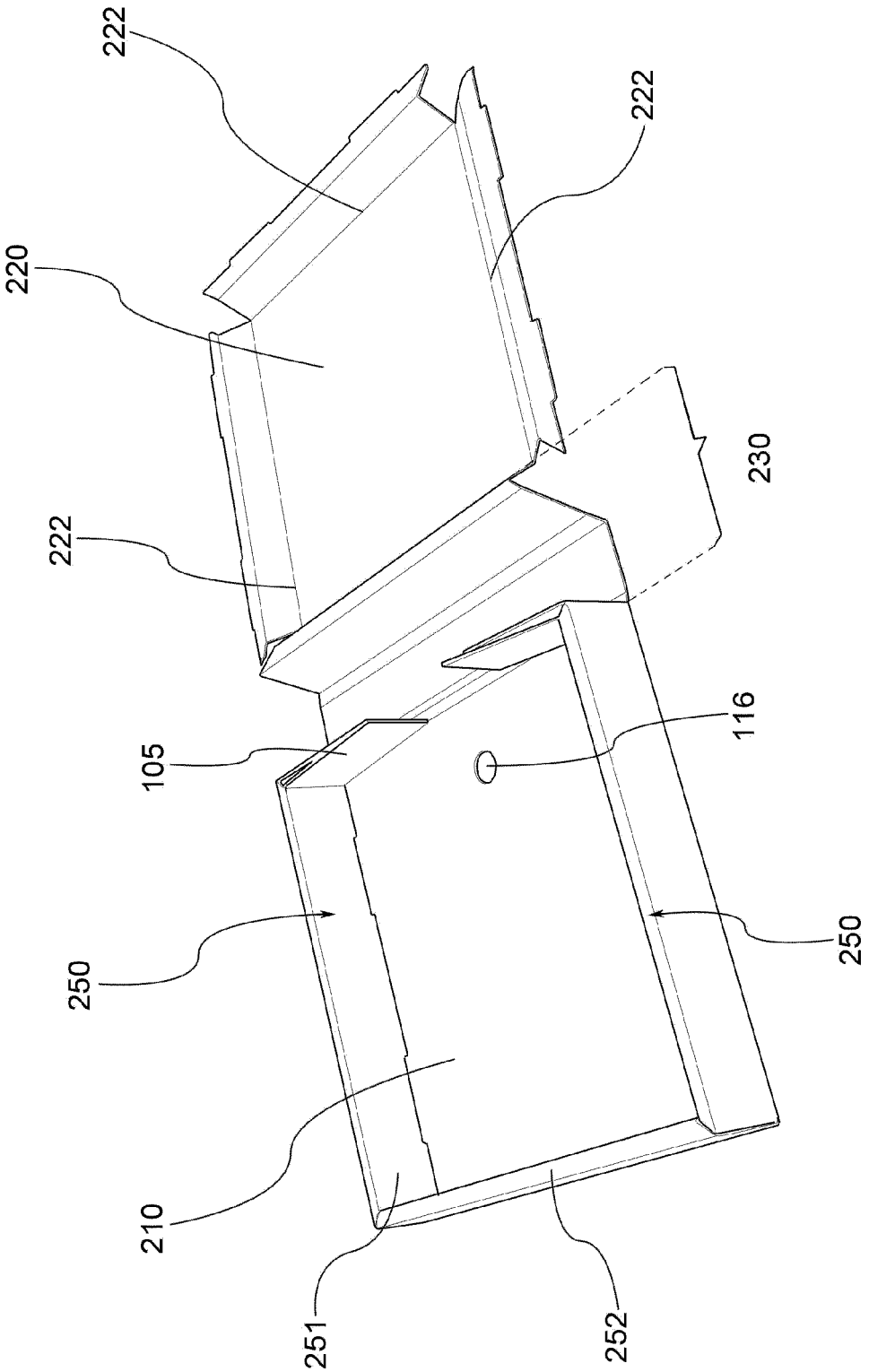

Fig. 7

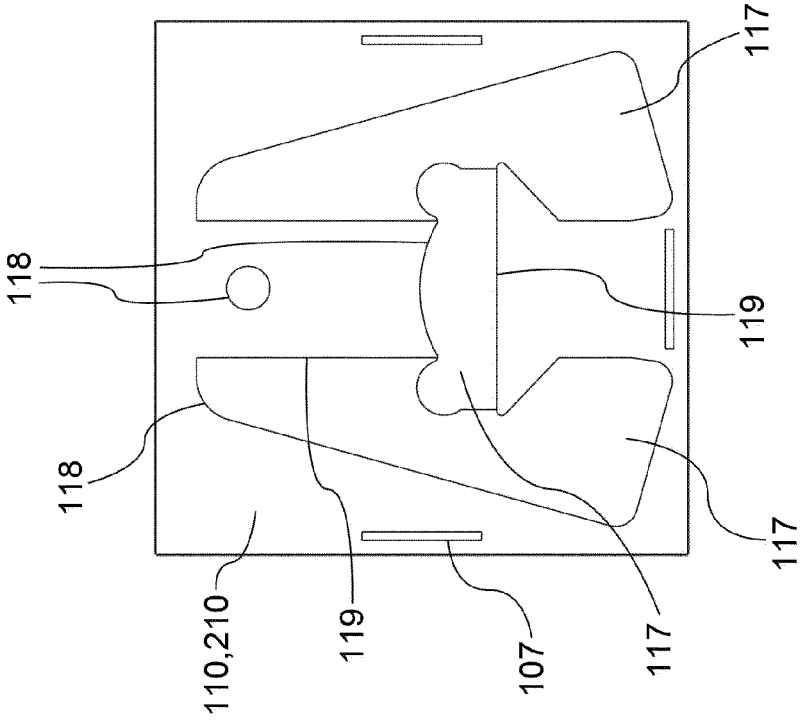

Fig.9

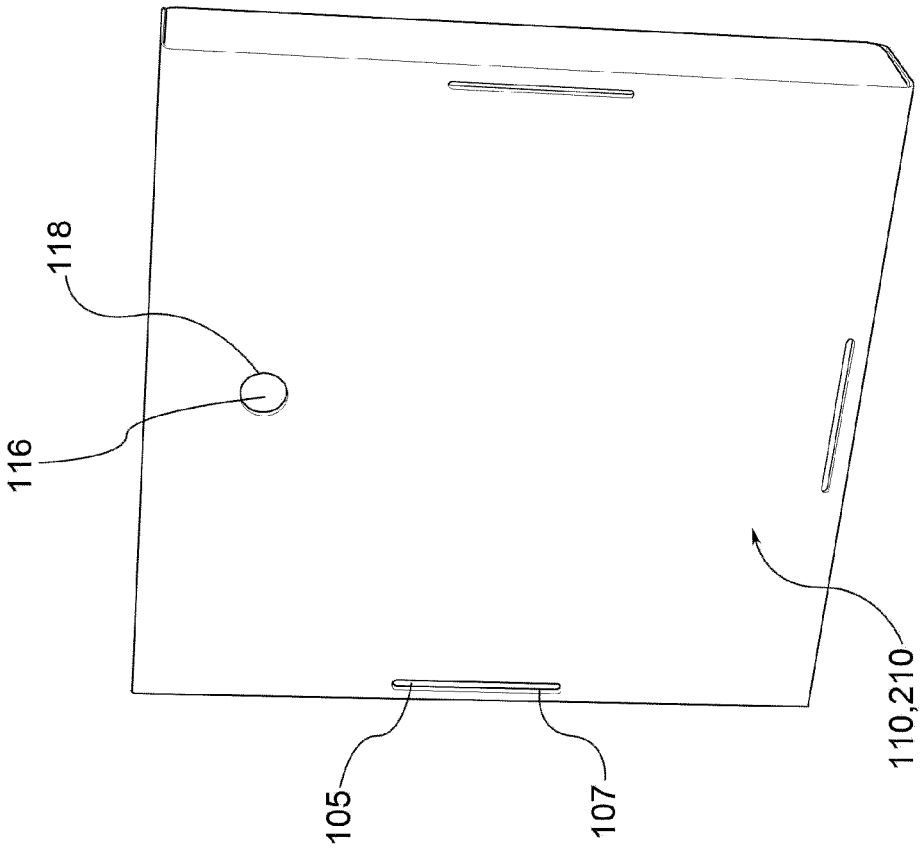

Fig.8

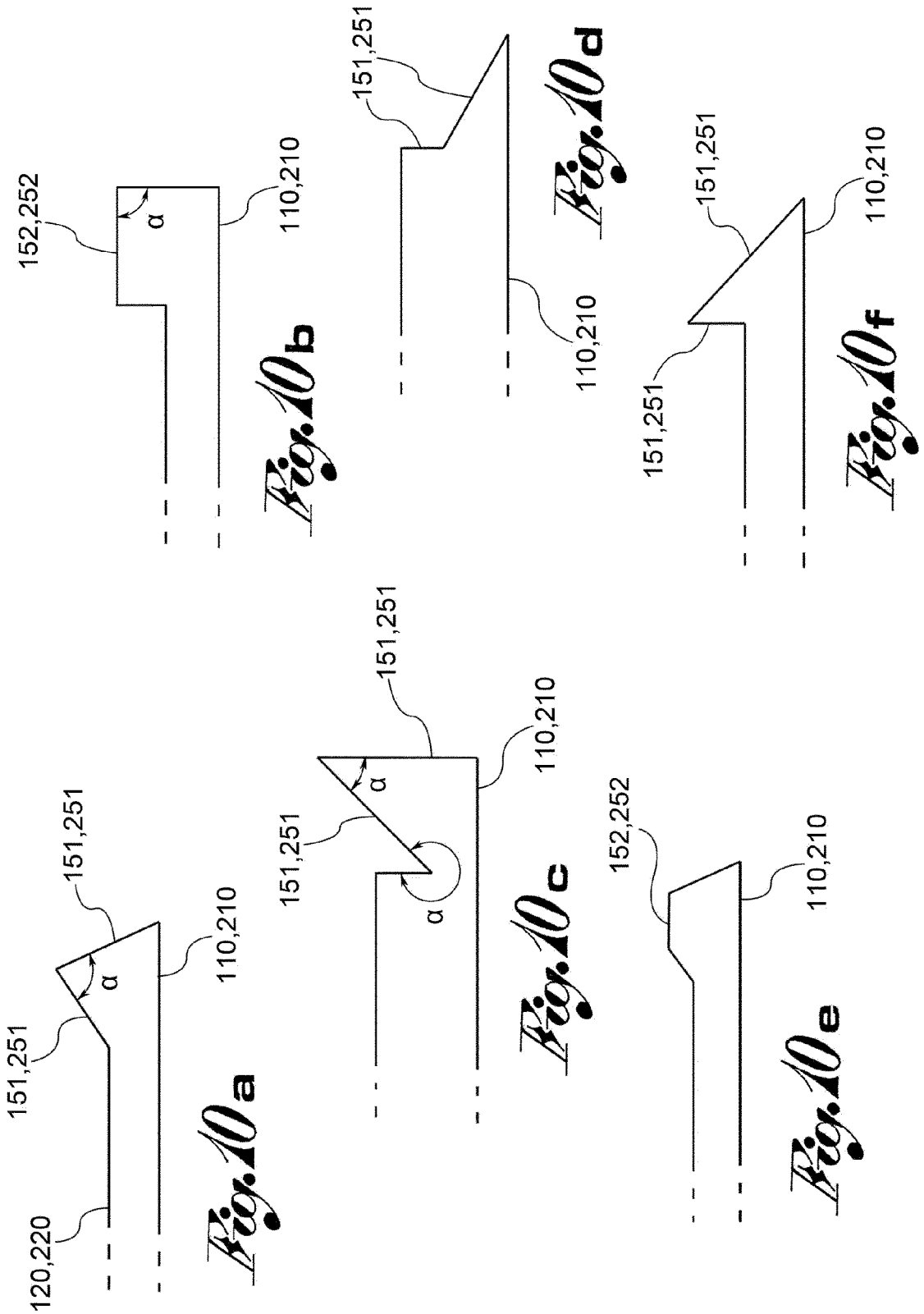

Fig.10a Fig.10b Fig.10c Fig.10d Fig.10e Fig.10f

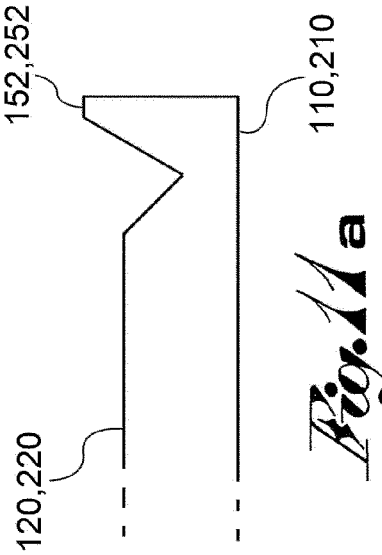

Fig.11a

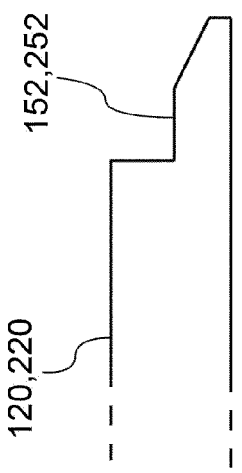

Fig.11b

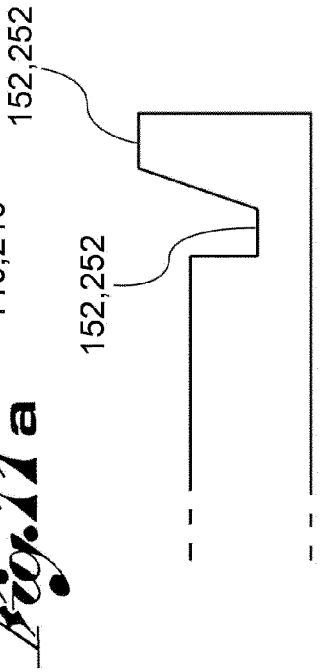

Fig.11c

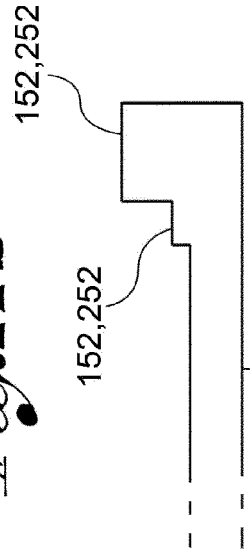

Fig.11d

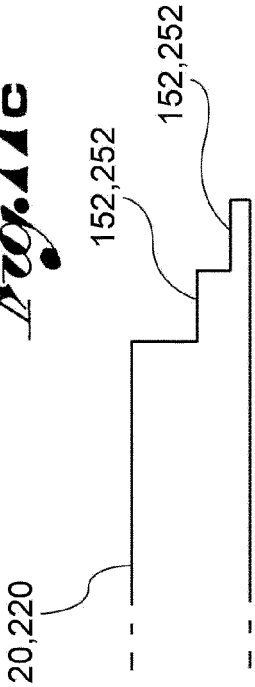

Fig.11e

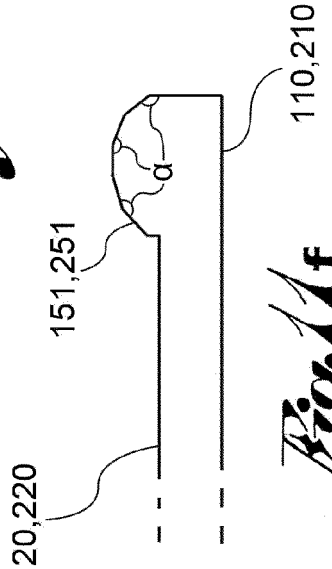

Fig.11f

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EUROPEAN SEARCH REPORT

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